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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,609	08/15/2001	Stephen John Lee	BE7344PCT	9900

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MARK KUSNER COMPANY LPA
HIGHLAND PLACE SUITE 310
6151 WILSON MILLS ROAD
HIGHLAND HEIGHTS, OH 44143

EXAMINER

KASTLER, SCOTT R

ART UNIT PAPER NUMBER

1742

DATE MAILED: 01/27/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,609

Applicant(s)

LEE, STEPHEN JOHN

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Objections

Claims 8 and 9 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The above claims do not fairly further limit independent apparatus claim 1 because, with respect to claim 8, Absent any specific showing that the method of construction materially affects the operation of an apparatus, the method of manufacture or use of an apparatus (how the element 12 is formed) cannot be relied upon to fairly further limit claims to the apparatus itself since in the instant case, the manner in which the element 12 is formed does not appear to materially affect the structure of the instantly claimed apparatus. With respect to claim 9, since no further "intended purpose" is recited in this claim which would narrow the scope of claim 9 with respect to independent claim 1, the intended purpose to which the refractory device could be finished to form would include all of the purposes of independent claim 9.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by King. King teaches, in the embodiment of figure 4 for example, a refractory device for the teeming of molten

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metal including a ceramic pouring tube (45) within a metallic can (30) which further encapsulates an additional ceramic supporting element (48), and a ceramic mortar (49) in an interface zone between the pouring tube element (45) and the support element (48), where the mortar (49) is to some extent deformable at elevated temperatures, and is structurally solid at lower temperatures, thereby meeting the broad definition of a pyroplastic ceramic material and thereby showing all aspects of the above claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of EP' 164. As applied to claim 1 above, King shows all aspects of the above claims except the specific recitation that the mortar (49) is a pyroplastic ceramic material, although as stated above, the mortar of King does meet the broad definition of a pyroplastic ceramic material. EP' 164 teaches that pyroplastic ceramic materials (11) for use as refractory mortars for the purpose of sealing gaps between refractory components in a molten metal teeming arrangement is well known in the molten metal dispensing arts. Because King broadly requires a refractory sealing material (49) for sealing gaps between refractory components in a molten metal dispensing device, and EP' 164 teaches an improved sealing material for the sealing of gaps between refractory components in a molten metal dispensing device, motivation to employ the improved

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sealing composition of EP' 164 as the required refractory sealing material (49) of King, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicant's arguments filed on 12-9-2002 have been fully considered but they are not persuasive. Applicant's argument that the mortar (49) of King does not meet the instant claim requirements that the material must be substantially solid at ambient temperatures and deformable at elevated temperatures experienced during metal teeming is not persuasive because as stated in the above rejections, the mortar (49) of King is solid at ambient temperatures and all materials are to some extent "deformable" at any temperature, including those experienced during metal teeming. Further, other than in claim 2, where temperature ranges are given, the term "during metal teeming" could include any temperature within the range of ambient (when pouring mercury for example) all the way up to temperatures experience when pouring molten refractory metals (titanium for example). Since the claims as presently written do not specify any particular degree of "deformability" and/or any more narrow temperature range where this deformation occurs, the mortar (49) of King meets all of the instantly claimed requirements for the "material" of independent claim 1. Also, in any event as stated in the rejections under 35 USC 103 above, EP' 164 teaches that the use of pyroplastic ceramic materials as refractory mortars is well known in the art. Applicant's mere statement that EP' 164 also does not render the instant claims obvious is not sufficient to overcome the instant rejections since no reasons why EP' 164 as applied above, does not fairly suggest the instant invention have been given.

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Applicant's further argument that King does not disclose a tube element supported in a metallic can is not persuasive because as stated in the above rejections King teaches a ceramic tube (45) within and supported by the metallic can (30). The instant claims not only allow for components between the can (30) and tube (45), but actually require the presence of such components (the ceramic support element and the material to be in the shock absorbing zone).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (703) 308-2506. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-3050. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Scott Kastler
Primary Examiner
Art Unit 1742

sk
January 24, 2003